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Wu et al.

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(54) **METHOD OF SURFACE MODIFYING GRAPHENE**

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See application file for complete search history.

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(57) **ABSTRACT**

A method of surface modifying graphene is disclosed and
includes placing powder-like graphene into a closed con-
tainer, heating up to a preset impurity detaching temperature
higher than 100° C. so as to detach the impurity from the
surface of graphene, further adjusting the treatment tempera-
ture to a preset surface modifying temperature, and injecting
the gaseous surface modifying agent to be physically
adsorbed by the surface of graphene. Thus, surface modified
graphene is formed. The surface modifying temperature is
higher than the sublimation temperature of the surface modi-
fying agent and less than the decomposition temperature of
the surface modifying agent. Therefore, the present invention
is simpler and safer because of only physical adsorption used
and no chemical reaction involved. Dispersibility of surface
modified graphene in the solution is greatly increased to
improve uniformity and enhance the performance of the final
product formed of surface modified graphene.

4 Claims, 5 Drawing Sheets

